REMARKS

This is in response to the Office Action dated August 6, 2003. With this response, claim 10 has been amended and new claims 17-23 have been added. Claims 1-23 are pending. The Examiner has withdrawn claims 1-9 and 12-17 from consideration as drawn to non-elected inventions. Claims 10-11 and 17-23 are at issue.

Claim 10 has been amended to recite a method for identifying a candidate compound for treating a neuropsychiatric or neurodevelopmental disorder, which method comprises contacting a reconstituted system for measuring presenilin associated membrane protein (PAMP) activity, comprising PAMP or a functional fragment thereof, and a PAMP substrate, with a test compound, the PAMP comprising an amino acid sequence at least 90% identical to at least one amino acid sequence selected from SEQ ID NO:14, SEQ ID NO:16, and SEQ ID NO:18, and detecting a difference in PAMP activity in the presence of the compound compared to PAMP activity in the absence of the compound; wherein the difference in PAMP activity identifies the candidate compound. This amendment is supported by the original specification as filed at, *e.g.*, page 8, line 17, to page 9, line 12; page 26, line 8 to page 28, line 13, and Figure 1.

New claim 17 calls for the PAMP having a DYIGS amino acid sequence motif starting at a position corresponding to residue 336 of SEQ ID NO:14. This claim is supported by, *e.g.*, Figure 1, which highlights this common motif in bold text.

New claims 18 and 19 call for the PAMP substrate being presenilin 1 and the PAMP substrate being ßAPP, respectively. This is supported by the specification at, *e.g.*, page 9, line 28 to page 10, line 1.

New claims 20 and 21 call for the PAMP comprising one or more specific amino acid sequence motifs at positions corresponding to certain residues in the human PAMP sequence, SEQ ID NO:14. This amendment is supported by Table 1 (page 8) and Figure 1.

New claims 22 and 23 are directed to specific PAMP amino acid sequences. This is supported by the specification at page 8, lines 17-20.

No new matter has been added by way of this amendment. Each of the Examiner's objections and rejections are discussed below.

Specification

The Examiner has objected to the sequence database citations referred to on page 8, line 2, page 9, line 2, and page 21, 2nd paragraph, and suggests providing sequence identifiers instead.

However, as set forth in the MPEP, §2422.03:

> In those instances in which prior art sequences are only referred to in a given application by name and a publication or accession reference, they need not be part of the "sequence listing" unless an Examiner considers the referred-to sequence to be "essential material" per MPEP § 608.01(p).

While Applicant would certainly incorporate any nucleotide and/or amino acid sequences described in one or more of the database entries considered by the Examiner to be essential material under §608.01(p), the Examiner did not so indicate in the Office Action. Applicant therefore respectfully requests that the Examiner either indicates why the subject matter is considered essential or withdraw the objection.

Obviousness-Type Double Patenting

The Examiner has rejected claims 10 and 11 under the judicially created doctrine of obviousness-type double-patenting as allegedly being unpatentable over claims 1-7 in U.S. Patent No. 6,020,143 or over claims 1-6 in U.S. Patent No. 6,383,783.

As amended, claim 10 calls for at least 90% identity to specific amino acid sequences, and claim 11 and new claims 17-22 incorporate the subject matter of claim 10 by dependency.

None of these specific amino acid sequences, much less any involvement of proteins comprising these amino acid sequences in a neuropsychiatric or neurodevelopmental disorder, was disclosed or suggested in either of U.S. Patent Nos. U.S. 6,020,143 and 6,383,783. Reconsideration and withdrawal of these rejections is therefore earnestly solicited.

Indefiniteness

Claims 10 and 11 have been rejected for alleged indefiniteness for not reciting any structural or functional limitations of PAMP, and for not making clear how the method steps of claim 10 coincide with the preamble of claim 10.

Claim 10 has been amended to recite a PAMP having at least 90% sequence identity to at least one of SEQ ID NOS:14, 16, and 18. Claim 10 has also been amended to recite that a difference in the PAMP activity in the presence and absence of the test compound identifies the candidate compound. Claim 11, as well as new claims 17-23, depend directly or indirectly from claim 10. Accordingly, reconsideration and withdrawal of these rejections is respectfully requested.

Anticipation

Claims 10 and 11 have been rejected as allegedly anticipated by U.S. Patent No. 6,020,143 under 35 U.S.C. §102(a), by U.S. Patent No. 6,383,758 under 35 U.S.C. 102(e), or by Curtis et al. (WO 01/85912). Specifically, the Examiner contends that each of these references teaches a presenilin-interacting, -binding, or -enhancing protein.

Claim 10 has been amended to recite a PAMP having at least 90% sequence identity to at least one of SEQ ID NOS:14, 16, and 18. Claim 11, as well as new claims 17-23 depend directly or indirectly from claim 10. None of U.S. Patent Nos. 6,020,143 or 6,383,758, or the Curtis et al. PCT publication, discloses or suggests any sequence having at least 90% sequence identity to SEQ ID NOS:14, 16, or 18. Thus, none of the references cited by the Examiner anticipates the invention set forth by the amended claims. Reconsideration and withdrawal of this rejection is therefore respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Dated: December 6, 2003

Respectfully submitted,
By _____

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Limited Recognition under
37 C.F.R. 10.9(b) (see attached)
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